



**PXWFS7M2**  
4K XDCAM Super  
35mm Camcorder

**\$13,199.00**

U.S. List Price

**Overview**

**Features**

Features	Benefits
Lever Lock Type E-Mount system	<p>Sony's new mount system securely locks E-Mount lenses to the camera body and enables the use of larger, heavier lenses without need for additional support.</p> <p>This breakthrough is based on a clever combination of advanced material science and ingenious engineering. The Lever-Lock Type E-Mount securely holds E-Mount lenses and adapters to the camera body. In fact, it can hold unsupported: Long, cine and zoom lenses of similar weight to unsupported PL-Mount lenses on the F55 (under static and dynamic loading).</p> <p>Operating the FS7 II Lever Lock Type E-Mount is similar to operating the PL-Mount common to cinema cameras.</p> <p>Place the E-Mount lens in the Lever Lock Type E-Mount opening and then, with your free hand, rotate the locking ring in a counterclockwise direction. This securely clamps the E-Mount lens in the mount. When the ring comes to a stop, a secondary latch automatically locks the ring in place to prevent unintentional disengagement. To disconnect the lens, switch off the secondary latch, then rotate the locking ring in the clockwise direction to release the lens.</p> <p>All the usual benefits of the E-Mount are retained.</p>
Electronic Variable ND	<p>Sony's unique new Electronic Variable ND technology, first introduced in the FS5, provides "run and gun" filmmakers with a whole new means to seamlessly adjust exposure while shooting.</p> <p>Variable ND frees the lens iris from the traditional job of exposure control. With Variable ND, the lens iris can be dedicated instead to the important job of setting depth-of-field. In documentary field work, bright exteriors and dim interiors no longer need automatically result in distracting variations in depth-of-field.</p> <p>Variable ND also permits any lens to be used consistently at its "sweet spot," within its best f-stop or T-stop range (peak optical performance for that particular lens). In so doing, Variable ND avoids the image degradation and softening that typically accompanies opening or closing the lens iris too much.</p> <p>The FS7 II offers three different Variable ND operation modes: Preset Variable ND, Manual Variable ND and Auto Variable ND. Large, easily accessible switches on the front side of the camera permit quick switching between these modes with the camera on the operator's shoulder.</p>
Preset Variable ND	<p>The ND turret knob enables four presets for ND attenuation. The first preset is "clear," in other words, no ND. That leaves three preset settings, which are user-selectable in 1/3 stop steps within the camera's 2 to 7 stop range.</p> <p>For example, each of the three user-selectable ND presets might be set to a desired ND density for each of three particular scenes, which, in combination with iris settings, could give each scene a particular look with regard to depth-of-field.</p>
Manual Variable ND	<p>This mode is ideal for "run and gun shooting." The operator can manually adjust exposure by turning either a knurled wheel near the front of the camera or an index-finger wheel on the SmartGrip. In either case, the result is a smooth, seamless adjustment of exposure within a 2 to 7 stop attenuation range. Both control wheels can be user-assigned to control ND density--or one of them can be reassigned to adjust audio level or lens iris.</p>
Auto Variable ND	<p>Auto ND can entirely replace the Auto Iris function, without any of the aforementioned optical aberrations or degradations caused by changes of iris aperture. Auto ND will prove incredibly useful to a single-person crew shooting nature or conducting interviews outside while the sun comes in and out from behind the clouds.</p> <p>Another critical new use of Auto Variable ND will be for shooting time-lapse of sunsets and sunrises, to ensure</p>

	<p>a steadily compensating exposure where desired.</p> <p>Note that any of the ten assignable buttons on the FS7 II can be assigned to toggle “Auto ND” on/off. This function could be used, for instance, to let the FS7 II quickly establish a ballpark exposure setting, which could then be manually trimmed to taste.</p>
Evolution of Platform	The third major development in the FS7 II concerns improved ergonomics and mechanical design.
A more efficient and versatile operator control layout	Buttons and controls are placed at intuitive locations for easy access while shooting. The operator side of the camera now also includes all the necessary controls for operating the new Variable ND feature. And the number of assignable buttons has increased from six to ten.
A more efficient and versatile viewfinder system	<p>The viewfinder is the most important camera-operator interface, used for framing every shot. The viewfinder eyepiece, when in use, also provides a contact point for stabilizing the camera while shooting handheld.</p> <p>The FS7 II's new stronger, simpler viewfinder support bracket makes possible quick and easy fine-tuning of the viewfinder's position--or choosing a radical reconfiguration. To simplify operation, the FS7's original single lever clamp system is replaced by a double clamp with discrete clamping knobs for both front-to-back and vertical height adjustment. This new design facilitates adjusting the viewfinder while shouldering the camera.</p> <p>Another FS7 II viewfinder bracket innovation is use of square rods which retain LCD horizontal alignment. Attaching the eyepiece to the FS7 II's LCD is simpler and easier. The FS7's eyepiece top latch is replaced by a fixed rectangular steel loop that instantly hooks the eyepiece flush and level, perfectly aligned to the LCD. Just secure the bottom latch and you're good to go.</p> <p>The FS7 II's eyepiece uses an industry-standard 52mm diopter. By removing the rubber eyecup, the original diopter is easily switched out for a diopter matching the operator's eyeglass prescription. This is a common request of many experienced camera operators.</p> <p>The FS7 II introduces a collapsible LCD hood for viewing the LCD without the eyepiece. The FS7 II's mic holder is no longer permanently attached to the end of the short 15mm rod that acts as a cross bar to join the viewfinder support bracket and the mic holder to the front of the handle. The mic holder's lever clamp now enables removing, reorienting, or relocating the mic holder.</p> <p>Furthermore, this short 15mm rod can now be replaced for a longer one that enables relocating the viewfinder eyepiece further out for “left eye dominant” operators.</p> <p>Another benefit of the FS7 II mic holder removable clamping system is that the viewfinder and mic holder can be transposed in seconds to the opposite side. This enables the operator to comfortably shoot from the camera's right side. This feature is often requested by experienced 16mm camera operators who once enjoyed the same flexibility from their Aatons and ARRI SRs.</p>
A smarter SmartGrip arm	The length of the FS7 II's SmartGrip can be changed without any tools. The new design uses knobs contoured to facilitate locking and loosening by hand, even when wearing gloves. Furthermore, the new design enables relocating the SmartGrip to a new position, closer to the camera body. This makes it easier to hold the FS7 II against the chest or underarm to permit shooting more comfortably, from more angles.
Media easier to eject	XQD cards now project twice as much from their slots in order to facilitate card changeover while wearing gloves
Signal Processing	<p>The FS7 II is built upon the proven FS7 platform. The specifications for the sensor, ISO sensitivity, and colorimetry all carry over.</p> <p>The FS7 II also has two signal processing modes: Cine-El and Custom. Cine-El offers three color grading spaces for electronic cinematography production. Custom mode hosts broadcast standards; until now, Custom Mode supported ITU Rec. BT-709, HD standard.</p> <p>A recently adopted signal distribution and display standard, the ITU Rec. BT 2020 defines various aspects of UHD TV such as display resolution, frame rate, chroma subsampling, bit depth and color space.</p> <p>In keeping with the times, the FS7 II adds BT2020 at UHD TV 3840 x 2160 display resolution and Y, Cb, Cr color subsampling to the Custom Mode. It is possible to record and also monitor on BT 2020 compliant monitors via HDMI 10-bit 422 or SDI at 10-bit 422 with a 709 monitor LUT applied.</p>

## Specifications

Camera Section Specifications	Detail
Built-in Optical Filters	ND filters OFF: CLEAR 1: 1/4ND 2: 1/16ND 3: 1/64ND Linear variable ND (1/4ND to 1/128ND)
Effective Picture Elements	17:9 4096 (H) x 2160 (V) 16:9 3840 (H) x 2160 (V)
Gain	-3, 0, 3, 6, 9, 12, 18 dB, AGC
Imaging Device	Super35 type Single-chip Exmor CMOS

Minimum Illumination	0.7 lx (+18dB,23.98P,Shutter OFF,ND Clear, F1.4)
S/N Ratio	57 dB (Y) (typical)
Sensitivity (2000 lx, 89.9% reflectance)	Video Gamma: T14 (3840 x 2160/23.98P mode 3200K)
Shutter Speed (Time)	1/3 sec to 1/9,000 sec
Slow & Quick Motion Function	XAVC-I mode 3840x2160: 1 to 60 frames (59.94P, 50P, 29.97P, 23.98P, 25P) XAVC-I mode 1920x1080:1 to 180 frames (59.94P, 29.97P, 23.98P) 1 to 150 frames (50P,25P) XAVC-L mode 3840x2160: 1 to 60 frames (59.94P, 50P, 29.97P, 23.98P, 25P) XAVC-L mode 1920x1080: 1 to 120 frames (59.94P, 50P, 29.97P, 23.98P, 25P)
White Balance	Preset, Memory A, Memory B(1500K-50000K)/ATW
<b>General Specifications</b>	<b>Detail</b>
Battery Operating Time	Approx. 1 hrs. with BP-U30 battery (while recording XAVC-I QFHD 59.94P, SELP18110G Lens, Viewfinder ON, not using external device) Approx. 2 hrs. with BP-U60 battery while recording XAVC-I QFHD 59.94P, SELP18110G Lens, Viewfinder ON, not using external device) Approx. 3 hrs. with BP-U90 battery (while recording XAVC-I QFHD 59.94P, SELP18110G Lens, Viewfinder ON, not using external device)
Dimensions (W x H x D)	6.25 x 9.65 x 9.72 inches (body without protrusions)
Mass	Approx. 4.4 lbs (body only) Approx. 9.9 lbs (with Viewfinder, Eyepiece, Grip Remote Control, BP-U30 battery, SELP18110G LENS, an XQD memory card)
Operating Temperature	32°F to 104°F (0°C to 40°C )
Power Consumption	Approx. 19W (while recording XAVC-I QFHD 59.94P, SELP18110G Lens, Viewfinder ON, not using external device)
Power Requirements	DC 16.5V (battery pack) DC 12.0V (AC adaptor)
Recording Format	XAVC-I mode:DCI4K 59.94P CBG, bit rate 600Mbps, MPEG-4 H.264/AVC XAVC-I mode:DCI4K 50P CBG, bit rate 500Mbps, MPEG-4 H.264/AVC XAVC-I mode:DCI4K 29.97P CBG, bit rate 300Mbps, MPEG-4 H.264/AVC XAVC-I mode:DCI4K 23.98P CBG, bit rate 240Mbps, MPEG-4 H.264/AVC XAVC-I mode:DCI4K 24.00P CBG, bit rate 240Mbps, MPEG-4 H.264/AVC XAVC-I mode:DCI4K 25P CBG, bit rate 250Mbps, MPEG-4 H.264/AVC XAVC-I mode:QFHD 59.94P CBG, bit rate 600Mbps, MPEG-4 H.264/AVC XAVC-I mode:QFHD 50P CBG, bit rate 500Mbps, MPEG-4 H.264/AVC XAVC-I mode:QFHD 29.97P CBG, bit rate 300Mbps, MPEG-4 H.264/AVC XAVC-I mode:QFHD 23.98P CBG, bit rate 240Mbps, MPEG-4 H.264/AVC XAVC-I mode:QFHD 25P CBG, bit rate 250Mbps, MPEG-4 H.264/AVC XAVC-I mode:HD 59.94P VBR, maximum bit rate 222Mbps, MPEG-4 H.264/AVC XAVC-I mode:HD 50P VBR, maximum bit rate 185Mbps, MPEG-4 H.264/AVC XAVC-I mode:HD 59.94i VBR, maximum bit rate 111Mbps, MPEG-4 H.264/AVC XAVC-I mode:HD 50i VBR, maximum bit rate 112Mbps, MPEG-4 H.264/AVC XAVC-I mode:HD 29.97P VBR, maximum bit rate 111Mbps, MPEG-4 H.264/AVC XAVC-I mode:HD 23.98P VBR, maximum bit rate 89Mbps, MPEG-4 H.264/AVC XAVC-I mode:HD 25P VBR, maximum bit rate 112Mbps, MPEG-4 H.264/AVC   XAVC-L QFHD 59.94P/50P mode: VBR, maximum bit rate 150Mbps, MPEG-4 H.264/AVC XAVC-L QFHD 29.97P/23.98P/25P mode: VBR, maximum bit rate 100Mbps, MPEG-4 H.264/AVC XAVC-L HD 50 mode: VBR, maximum bit rate 50Mbps, MPEG-4 H.264/AVC XAVC-L HD 35 mode:VBR, maximum bit rate 35Mbps, MPEG-4 H.264/AVC XAVC-L HD 25 mode:VBR, maximum bit rate 25Mbps, MPEG-4 H.264/AVC   MPEG HD422 mode:CBR, maximum bit rate 50Mbps, MPEG-2 422P@HL
Recording Frame Rate	XAVC-I DCI4K mode: 4096x2160/ 59.94P, 50P, 29.97P, 23.98P, 24P, 25P XAVC-I QFHD mode: 3840x2160/ 59.94P, 50P, 29.97P, 23.98P, 25P XAVC-I HD mode: 1920x1080/59.94P, 50P, 59.94i, 50i, 29.97P, 23.98P, 25P XAVC-L QFHD mode: 3840x2160/59.94P, 50P, 29.97P, 23.98P, 25P XAVC-L HD 50 mode: 1920x1080/59.94P, 50P, 59.94i, 50i, 29.97P, 23.98P, 25P XAVC-L 35 mode: 1920x1080/59.94P, 50P, 59.94i, 50i, 29.97P, 23.98P, 25P XAVC-L 25 mode: 1920x1080/59.94i, 50i MPEG HD422 mode: 1920x1080/59.94i, 50i, 29.97P, 23.98P, 25P 1280x720/59.94P, 50P, 29.97P, 23.98P, 25P
Recording/Playback Time	XAVC-I mode QFHD 59.94P When using QD-G128A(128GB): Approx. 22 minutes   XAVC-I mode QFHD 50P When using QD-G128A(128GB): Approx. 26 minutes  XAVC-I mode QFHD 29.97P When using QD-G128A(128GB): Approx. 44 minutes 

	XAVC-I mode QFHD 23.98P When using QD-G128A(128GB): Approx. 55 minutes XAVC-I mode QFHD 25P When using QD-G128A(128GB): Approx. 52 minutes XAVC-I mode HD 59.94P When using QD-G128A(128GB): Approx. 59 minutes XAVC-I mode HD 50P When using QD-G128A(128GB): Approx. 71 minutes XAVC-I mode HD 59.94i When using QD-G128A(128GB): Approx. 118 minutes XAVC-I mode HD 50i When using QD-G128A(128GB): Approx. 141 minutes XAVC-I mode HD 29.97P When using QD-G128A(128GB): Approx. 118 minutes XAVC-I mode HD 23.98P When using QD-G128A(128GB): Approx. 147 minutes XAVC-I mode HD 25P When using QD-G128A(128GB): Approx. 141 minutes XAVC-L mode QFHD 59.94P/50P When using QD-G128A(128GB): Approx. 87 minutes XAVC-L mode QFHD 29.97P/23.98P/25P mode: When using QD-G128A(128GB): Approx. 131 minutes XAVC-L 50 mode When using QD-G128A(128GB): Approx. 262 minutes XAVC-L 35 mode When using QD-G128A(128GB): Approx. 374 minutes XAVC-L 25 mode When using QD-G128A(128GB): Approx. 524 minutes MPEG HD422 mode When using QD-G128A(128GB): Approx. 262 minutes
Storage Temperature	-4°F to +140°F (-20°C to +60°C )

Inputs/Outputs Specifications		Detail
Audio Input	XLR-type 3-pin (female) (x2), line/mic/mic +48 V selectable Mic Reference: -40, -50, -60dBu	
DC Input	DC jack	
HDMI Output	Type A (x1)	
Headphone Output	Stereo mini jack (x1) -16dBu 16	
Remote	Stereo mini-mini jack (2.5 mm)	
SDI Output	BNC(x2), switchable with 3G-SDI/HD-SDI SMTPE292M/424M/425M	
Speaker Output	Monaural	
USB	USB device, mini-B (x1)	
Lens Specifications		Detail
Lens Mount	E-mount (lever lock type)	
Media Specifications		Detail
Type	XQD Card slot(x2) SD Card slot(x1) for saving configuration data	
Monitoring Specifications		Detail
Built-in LCD Monitor	8.8cm (3.5 type) Approx. 1.56M dots	

## Accessories

Optional Accessories		
Model:	Description:	U.S.List Price
XDCAFS7	I/O and CODEC Extension Unit for PXW-FS7	\$2,399.00
BPU90	Rechargeable Lithium-ion Battery Pack	\$450.00
BPU30	Rechargeable Lithium-ion Battery Pack	\$150.00
BCU2	Battery Charging Unit	\$360.00
BPU60	Rechargeable Lithium-ion Battery Pack	\$300.00
BPU60T	Rechargeable Lithium-ion battery Pack (56Wh) with power out terminal	\$318.00

## Media

Model:	Description:	U.S.List Price
QDG128E/J	XQD G Series 128GB Memory Card	Pricing available upon request